REMARKS

The rejection of Claims 1, 4-10, and 14-19 under 35 U.S.C. § 103(a) as unpatentable over JP 11-246733 (Hiiro et al) in view of U.S. 3,679,776 (Foss) or U.S. 5,219,961 (Zucchini et al) or U.S. 6,525,142 (Erickson et al) or Chemical Marketing Reporter (CMR), is respectfully requested. (Claims 14-19 should not have been rejected because they depended on either Claim 2 or Claim 3.) At any rate, the rejection is now moot in view of the above-discussed amendment, which incorporates the subject of Claim 3 into Claim 1. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-20 under 35 U.S.C. § 103(a) as unpatentable over US 2006/0177652 (Khandpur et al), is respectfully requested.

As recited in above-amended Claim 1, the invention is a polymer composition, comprising:

a block copolymer (a) comprising a polymer block A, which comprises mainly an α-methylstyrene, and a hydrogenated or unhydrogenated polymer block B, which comprises a conjugated diene, wherein block copolymer (a) has a weight average molecular weight of 30,000 to 200,000;

an acrylic resin (b) which is a homopolymer of methyl methacrylate or a copolymer comprising methyl methacrylate as the major component and copolymerizable monomers selected from the group consisting of (meth)acrylic acid, metal salts of (meth)acrylic acid, (meth)acrylic acid esters, vinyl acetate, aromatic vinyl compounds, maleic anhydride, maleimide compounds and mixtures thereof; and

optionally, a softener (c); and

wherein proportions (by mass) of respective components in the polymer composition are such that each of the following relationships (1) and (2) holds:

$0.05 < Wb/Wa < 2$ (1) and

$$Wc/(Wa + Wb + Wc) < 0.5 \qquad (2)$$

wherein Wa, Wb, and Wc represent the amounts (by mass) of the block copolymer (a), the acrylic resin (b) and the softener (c), respectively, and

wherein the polymer composition has a morphology in which the block copolymer (a) forms a continuous phase (matrix) and the acrylic resin (b) forms particles having an average particle size of 0.2μm or less, that are dispersed throughout the continuous phase, forming sea-island structures.

Khandpur et al discloses a polymer mixture containing a styrenic block copolymer and a polyarylene oxide polymer [0005], which may contain from about 0.1 parts by weight to about 50 parts by weight, based on 100 parts of the polymer mixture, of expandable polymeric microspheres [0040], which microspheres feature a flexible, thermoplastic, polymeric shell and a core that includes a liquid and/or gases that expand upon heating [0035], wherein the thermoplastic resins that may be used as the shell include acrylic and methacrylic acid ester polymers and vinylidene chloride-containing polymers [0038].

Khandpur et al neither discloses nor otherwise suggests the presently-claimed invention. Khandpur et al does not disclose a polymer meeting the terms of acrylic resin (b) in Claim 1 herein, i.e., a homopolymer of methyl methacrylate or a copolymer comprising methyl methacrylate as the major component and copolymerizable monomers selected from the Markush group of such monomers. The only methyl methacrylate polymer or copolymer disclosed by Khandpur et al is an acrylonitrile-vinylidene chloride-methacrylonitrile-methyl methacrylate copolymer [0038]. More fundamentally, even if Khandpur et al did disclose presently-recited acrylic resin (b) herein, there is no reason to believe that the above-discussed composition of Khandpur et al meets the presently-recited morphology limitation of the claims. While Khandpur et al discloses a mixing step in which their expandable polymeric microspheres and other additives, to the extent present, are distributed

substantially homogeneously throughout the molten polymer mixture previously formed by melt mixing the styrenic block copolymer and the polyarylene oxide polymer [0051], Khandpur et al contains no disclosure of the particle size of their expandable microspheres, and what is more, the product of this mixing step is only temporary, since the resultant mixture is then fed to an extrusion die at a temperature at or above the temperature required to cause expansion of the expandable microspheres [0052], presumably destroying any particulate nature of the microspheres.

In addition, it is noted that the present claims require that polymer block A of block copolymer (a) comprises mainly an α-methyl styrene. The specification herein contains comparative data comparing, *inter alia*, polymer compositions according to the presently-claimed invention and corresponding compositions in which styrene is used as polymer block A.

The comparative data demonstrates using seven (7) different block copolymers (a), labeled Block copolymer 1 through Block copolymer 7, respectively. Data therefor is shown in Table 1 at page 68 of the specification. Block copolymers 1 and 2 are according to the presently-claimed invention. (While Block copolymers 3, 4 and 6 contain a α-methyl styrene block, they are outside the terms of the present invention because of molecular weight of block copolymer (a) being too high, a different polymer block B, and molecular weight of block copolymer (a) being too low, respectively.) Block copolymers 5 and 7 are similar to Block copolymers 1 and 2, respectively, but styrene is used as polymer block A.

Comparative Examples 5, 6, 11, 17 and 18 all use Block copolymer 5 as block copolymer (a). Comparative Example 22 uses Block copolymer 7 as block copolymer (a).

Results for Comparative Examples 5 and 6 are detailed in Table 3 at page 72 of the specification. (Results for the corresponding Examples are detailed in Table 2 at page 71 of the specification.) As described in the specification at page 75, line 12ff, Comparative

Examples 5 and 6 exhibit poor scratch resistance, poor abrasion resistance, and weak mechanical strength, even though relationships (1) and (2) of the present claims are satisfied.

Similar results are obtained and described in the specification for above-discussed Comparative Examples 11, 17, 18, and 22. Compare Example 17 (Table 5) with Comparative Example 11 (Table 6); Examples 22 and 23 (Table 7) with Comparative Examples 17 and 18, respectively (Table 10); and Example 32 (Table 11) with Comparative Example 22 (Table 13).

Khandpur et al, on the other hand, discloses no preference for the particular styrene or styrene homolog or analog used therein [0023], although styrene is used in all the examples thereof [0067]. In effect, Applicants have compared to the preferred embodiment of Khandpur et al with regard to the styrenic block, which would appear to be the closest prior art.

For all the above reasons, it is respectfully requested that the rejection be withdrawn.

Applicants respectfully submit that all of the presently-pending claims in this application are now in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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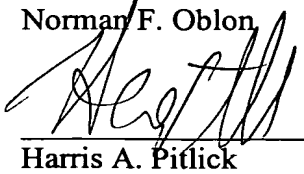

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